

Patent Claims

1. Method for CVD coating, in particular for aluminizing, at least of one workpiece, whereby a coating gas which is used to coat the workpiece or each workpiece is generated, **characterized in that**
 - a) workpieces (11) to be coated are arranged in a coating room (10),
 - b) coating granules (17) are arranged near the workpieces (11) to be coated,
 - c) the coating room (10) is heated to the process temperature together with the workpieces (11) to be coated and together with the coating granules (17),
 - d) after reaching the process temperature, a process gas is introduced onto the coating granules (17), thereby generating the coating gas.
2. Method according to Claim 1, **characterized in that** the workpieces (11) to be coated are positioned in several levels (12) arranged one above the other in the coating room (10) whereby coating granules are arranged (17) directly beneath the workpieces (11) to be coated in the area of each level (12).
3. Method according to Claim 1 or 2, **characterized in that** the process gas is introduced onto the coating granules (17) in the area of each level (12).
4. Method according to one or more of Claims 1 through 3, **characterized in that** the actual coating of the workpieces (11) is performed after introducing the process gas onto the coating granules (17) and thus after generating the coating gas.

5. Method according to any one or more of Claims 1 through 4, **characterized in that** a halide gas is used as the process gas.
6. Method according to any one or more of Claims 1 through 5, **characterized in that** a vacuum is generated before introducing the process gas into the coating room (10).
7. Method according to any one or more of Claims 1 through 6, **characterized in that** process parameters are kept constant during the holding time.
8. Method according to any one or more of Claims 1 through 6, **characterized in that** a process pressure is pulsed during the holding time by lowering the process pressure by withdrawing coating gas and then creating new coating gas.
9. Method according to Claim 8, **characterized in that** after lowering the process pressure, process gas is again introduced onto the coating granules (17) until the process pressure has been restored.
10. Method according to Claim 8 and 9 for deposition of interior coatings on hollow bodies, **characterized in that** pulsing of the process pressure is performed once or cyclically by withdrawing the coating gas and reintroducing process gas onto the coating granules (17).
11. Device for CVD coating, in particular for aluminizing, having a coating room (10) in which at least one workpiece (11) to be coated is situated, having a device for generating coating gas which serves to coat the workpiece or each workpiece (11), **characterized in that** the

device for generating the coating gas is arranged within the coating room (10) near the workpieces (11) that are to be coated.

12. Device according to Claim 11, **characterized in that** the device for creating the coating gas has multiple receptacle devices (16) for coating granules, arranged in levels (12) running one above the other, whereby workpieces (11) that are to be coated can be positioned directly above and in the area of the receptacle devices (16) filled with coating granules (17).
13. Device according to Claim 12, **characterized in that** the receptacle devices (16) have a holding tray (18) for the coating granules (17) and a grating (19) which borders the holding tray (18) toward the top whereby the workpieces (11) to be coated can be positioned on the grating (19).
14. Device according to any one or more of Claims 1 through 13, **characterized in that** a device for introducing process gas is arranged in the area of each receptacle device (16) for the coating granules (17).
15. Device according to Claim 12, **characterized in that** the device for introducing process gas is designed as a branch (18) [Translator's Note: Elsewhere, the branch is designated (15).] of a pipe (14) running vertically in the coating room (11) and protrudes into the corresponding receptacle device (16) for coating granules (17).
16. Device according to any one or more of Claims 11 through 15, **characterized by** a heating device for heating the coating room (10) and the workpieces (11) that are to be coated and are arranged in the coating room (10) to the process temperature.

17. Device according to any one or more of Claims 11 through 16, **characterized by** a pump mechanism for generating a vacuum in the coating room (10) and/or for pulsing the process pressure.